



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/564,677

10/17/2006

Heather K. Kranz

58913US004

1712

32692

7590

10/14/2009

3M INNOVATIVE PROPERTIES COMPANY

PO BOX 33427

ST. PAUL, MN 55133-3427

EXAMINER

NELSON, MICHAEL B

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

10/14/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

LegalDocketing@mmm.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,677	<b>Applicant(s)</b> KRANZ ET AL.	
	<b>Examiner</b> MICHAEL B. NELSON	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 31-52 is/are pending in the application.
- 4a) Of the above claim(s) 43-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-42, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/23/09 has been entered. Claims 31-42, 51 and 52 are currently under examination on the merits. Applicant's amendments to the specification are entered as being drawn from a reference which was previously incorporated into the original specification.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 31-42 and 51 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 recites the phrase "region of interest" which is vague and indefinite in that it is unclear what qualifies as the interested region. Claim 42 recites the phrase "intermingle" which is vague and indefinite in that it is unclear if intermingle is meant to mean that the materials from the different layers of the stack melt and form a new layer from a mixture of said melted materials or if it is simply meant to convey that the layers are in mutual communication with one another.

Art Unit: 1794

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 31-35, 37-42, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (WO 01/096104) in view Stefanik (U.S. 4,046,951).

Regarding claims 31-33, 51 and 52, Liu et al. discloses a non-metallic polymer based optical film which achieves the instantly claimed optical properties (See Claims 14 and 20). Liu

Art Unit: 1794

et al. also discloses that delamination of the layers in the film should be avoided (first full paragraph, page 25). Liu et al. discloses a laminate with more than 100 layers which is bonded on both sides by PVB and then bonded on those both sides by glass (Example 2, Page 29-30 and Fig. 3). Liu et al. does not disclose the peripheral sealing of the multilayer film.

Stefanik discloses a method of fusing together the layers of a polymeric multilayer article before autoclaving to protect the laminate from exposure (C2, L35-60, Fig. 2, C5, L20-C3, L35 and C4, L30-45). Since the fusing process is intended to protect the layers even after autoclaving the bond will remain intact and thereby prevent delamination. One having ordinary skill in the art at the time of the invention would have found it obvious to have applied the bonding edge sealant to the optical microlayer film of Liu et al. in order to protect the layers from exposure and also to help bind the layers together through out the glazing process.

Regarding claims 34, 35, 37-42, modified Liu et al. discloses all of the limitations as set forth above. Additionally, Liu et al. discloses that the PVB layers are laminated to the microlayer stack (Fig. 3). Since the sheets are coextensive, the bonding of the optical film and the PVB layers is considered fully bonded. The peripheral edges of all the layers in the glazing assembly are disclosed as being substantially coextensive (Fig. 3). Since the bonding PVB layers do not surround the exposed edge of the optical film (Fig. 3) the optical film is not fully encapsulated by the bonding layers. Stefanik shows that the bonding layers, 42, 44 and 46 (Fig. 2) are attached (i.e. fused) to all the layers of the laminate (i.e. they run perpendicular to the layers). The layers of the optical stack are considered to intermingle since all of the layers (24, 26, 28...) are joined together by one continuous strip of bonding agent (42, 44 and 46). Also

Art Unit: 1794

during the autoclave process, the layers being laminated would intermingle to some degree. The thickness of the bonding layers is greater than 10 microns (C5, L55-67). The glazing of modified Liu et al. would be suitable for a vehicle window.

8. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (WO 01/096104) in view Stefanik (U.S. 4,046,951) as applied to claim 33 above, and further in view of Gourio (U.S. 6,334,382).

Regarding claim 36, modified Liu et al. discloses all of the limitations as set forth above. Liu et al. does not disclose that the optical film extend beyond the peripheral edge of the bonding layers. Gourio discloses an optical laminate in which an optical layers (3 and 2) extends past the bonding layers (9) (Fig. 2). Gourio also discloses that bonding layer 9 can be made into two separate layers on either side of the optical layer (3 and 2) by reducing the gap between portion 3 and portion 2 (C3, L25-50). The extension of the layer (i.e. portion 3) is disclosed as improving impact resistance of the glass laminate (C2, L5-20).

The inventions of both modified Liu et al. and Gourio are drawn to the field of optical laminates and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the optical film layer dimensions of modified Liu et al. by extending the layer as taught by Gourio for the purposes of imparting improved impact resistance.

### ***Response to Arguments***

9. Applicant's arguments filed on 07/23/09 are considered moot in light of the new grounds of rejection which were necessitated by applicant's amendments.

Art Unit: 1794

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

/MN/  
08/14/09